

HIGH PERFORMANCE CAPACITOR MICROPHONE AND MANUFACTURING METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

A microphone (100) and method of manufacture thereof is disclosed. The microphone (100) includes a housing (108), a diaphragm assembly (120), a spacer (134), a backplate assembly (140), a body assembly (150), and a printed circuit board (164) disposed within the housing (100). The diaphragm assembly (120) and the backplate assembly (140) constitute a variable capacitor responsive to sound pressure level changes coupled through an acoustic port (118). The base capacitance is inversely proportional to the thickness of the spacer (134). The backplate assembly (140) is disk shaped with protrusions and coupled to the body assembly (150) such that an acoustic passage (172) is formed between an outer edge of the backplate assembly (140) and an inner periphery of the hollow body assembly (150). The body assembly (150) comprises conductive mount (158) for electrically coupling the backplate assembly (140) to a first surface (166) of a circuit board (164). A second surface (168) of the circuit board (164) is then held in contact with the connecting surface (114) of the housing (108) by mechanical fastening such as crimping, soldering, welding or adhesive bonding.